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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,781	07/20/2005	Walter Dorr	49090	9232
1609 7590 01/08/2008 ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P. 1300 19TH STREET, N.W. SUITE 600 WASHINGTON,, DC 20036			EXAMINER LOPEZ, FRANK D	
			ART UNIT 3745	PAPER NUMBER
			MAIL DATE 01/08/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/542,781

Applicant(s)

DORR, WALTER

Examiner

F. Daniel Lopez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 09 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 11-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 11-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response to Amendment

Applicant's arguments filed October 9, 2007, have been fully considered but they are not deemed to be persuasive.

Applicant's arguments with respect to claims 11-24 have been considered but are deemed to be moot in view of the new grounds of rejection. The new grounds of rejection are necessitated by the added limitations that the piston divides the tube into gas and hydraulic fluid space (claim 1 line 3-4) and the magnet arrangement is on a smaller circumferential section of the piston.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 11-18 and 20-24 are rejected under 35 U.S.C. § 103 as being unpatentable over Schabuble et al in view of Mano et al, Clark and Goldring. Schabuble et al discloses a piston type device comprising a piston (27, 28) of a non-magnetizable material (column 4 line 22-23) axially movable in a cylindrical tube (29) of magnetizable material (column 4 line 14-16), and having radially smaller (28) and larger (27) circumferential sections spaced from and engaging the tube, with a radial shoulder there between; a magnet arrangement including a plurality of permanent magnets (23, fig 6) formed as an annular ring (22), mounted between first and second ring elements (25, 26) of magnetizable material; wherein the ring elements have an exterior diameter, adjacent the magnets, spaced from the tube, and, more remote from the magnets having a exterior diameter approximating the interior diameter of the tube, and wherein the magnets are mounted at a radial distance from a circumference of the piston, in a row, concentric with a longitudinal axis of the piston, with a same polarity relative to each other so that their polar axis extend parallel to the longitudinal axis; two Hall effect sensors (21, 21', fig 5, column 2 line 21-22) positioned on an exterior of the cylindrical tube, which responds to the field generated by the magnets, to determine piston position; wherein the piston divides the tube into first and second spaces; but does not

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disclose that the magnet arrangement is mounted on and about the smaller circumferential section; or that the first space is a gas space and the second space is a hydraulic fluid space; that the Hall effect sensors sense end positions of the piston; or that a threaded ring engages a threading on the piston to hold the annular rings together on the smaller circumferential section. "Accumulator" is considered intended use and therefore given no patentable weight.

Mano et al teaches, for a piston type device comprising a piston (2) axially movable in a cylindrical tube (1) and having radially smaller and larger circumferential sections spaced from and engaging the tube, with a radial shoulder there between; an annular permanent magnet arrangement (3) is mounted to the piston; that the magnet arrangement is mounted on and about the smaller circumferential section.

Clark teaches, for a piston type device comprising a piston (20, 22, 28) axially movable in a cylindrical tube (16) and having radially smaller and larger circumferential sections (as part of 20) spaced from and engaging the tube, with a radial shoulder there between; with an arrangement mounted on and about the smaller circumferential section; that a threaded ring (28) engages a threading on the piston to hold the annular rings together on the smaller circumferential section.

Since the mounting of the magnet arrangement of Schabuble et al and Mano et al are interchangeable in the piston art; it would have been obvious at the time the invention was made to one having ordinary skill in the art to mount the magnet arrangement of Schabuble et al on and about the smaller circumferential section, as taught by Mano et al, wherein a threaded ring engages a threading on the piston to hold the annular rings together on the smaller circumferential section, as taught by Clark, since one having ordinary skill in the art would have been able to carry out such a mounting and the resulting combination would predictable work in the same manner.

Goldring teaches, for a piston type device comprising a piston (27) axially movable in a cylindrical tube (22), dividing the tube into first (to the left in fig 2) and (to the right in fig 2) second spaces; that the first space is a gas space (column 4 line 64-65) and the second space is a hydraulic fluid space (column 4 line 30-33).

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Since Schabuble et al doesn't give details of how the piston divides the tube and Mano et al does; it would have been obvious at the time the invention was made to one having ordinary skill in the piston art to make the first space of Schabuble et al a gas space and the second space a hydraulic fluid space, as taught by Goldring, since one having ordinary skill in the art would have been able to carry out such a configuration and the results would be reasonably predictable.

The placement of the sensors depends on what operation is being controlled. When the operation of the piston is controlled at both end positions, it would have been obvious at the time the invention was made to one having ordinary skill in the piston art to position the sensors to sense the end positions of the piston.

Claim 19 is rejected under 35 U.S.C. § 103 as being unpatentable over Schabuble et al in view of Mano et al, Clark and Goldring, as applied to claim 11 above, and further in view of EP 2001 082,416. The modified Schabuble et al discloses all of the elements of claim 19, as discussed in the above rejection, and includes a seal (9) between the piston and the tube; but does not disclose that there is a sealing element between the second annular ring and the shoulder surface.

EP 2001 082,416 teaches, for a piston type device comprising a piston (12) axially movable in a cylindrical tube (11) and having radially smaller and larger circumferential sections spaced from and engaging the tube, with a radial shoulder there between; wherein an annular permanent magnet arrangement (3) is mounted to the piston on and about the smaller circumferential section; and wherein a seal (16) is between the piston and the tube; there the sealing element is between the second annular ring and the shoulder surface.

Since the placement of the seals of the modified Schabuble et al and EP 2001 082,416 are interchangeable in the piston art, it would have been obvious at the time the invention was made to one having ordinary skill in the art to place the seal of the modified Schabuble et al between the second annular ring and the shoulder surface, as taught by EP 2001 082,416, since one having ordinary skill in the art would have been

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able to carry out such a placement and the resulting combination would predictable work in the same manner.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is 571-272-4821. The examiner can normally be reached on Monday-Thursday from 6:00 AM –4:30: PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on 571-272-4820. The fax number for this group is 571-273-8300. Any inquiry of a general nature should be directed to the Help Desk, whose telephone number is 1-800-PTO-9199.

/F. Daniel Lopez/

F. Daniel Lopez
Primary Examiner
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January 3, 2008